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**Term:** L4 and l1

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**DATE:** Wednesday, May 29, 2002   [Printable Copy](#)   [Create Case](#)**Set Name Query**  
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result set*DB=USPT,PGPB; PLUR=YES; OP=AND*

<u>L5</u>	L4 and l1	5	<u>L5</u>
<u>L4</u>	L3 or l2	1343894	<u>L4</u>
<u>L3</u>	(embryonic near6 (stem or germ or carcinoma)) or es or eg or ec	1343872	<u>L3</u>
<u>L2</u>	(multipotent or multipotential) near6 cell	527	<u>L2</u>
<u>L1</u>	neuroprogenitor near6 cell	5	<u>L1</u>

END OF SEARCH HISTORY

**WEST**[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 5 of 5 returned.**☐ 1. Document ID: US 20020049178 A1

L5: Entry 1 of 5

File: PGPB

Apr 25, 2002

PGPUB-DOCUMENT-NUMBER: 20020049178

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020049178 A1

TITLE: Method of inducing neuronal production in the brain and spinal cord

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw Desc
Image												

☐ 2. Document ID: US 20020037522 A1

L5: Entry 2 of 5

File: PGPB

Mar 28, 2002

PGPUB-DOCUMENT-NUMBER: 20020037522

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020037522 A1

TITLE: Gene encoding a multidrug resistance human P-glycoprotein homologue on chromosome 7p15-21 and uses thereof

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments		KWIC	Draw Desc
Image												

☐ 3. Document ID: US 20010007657 A1

L5: Entry 3 of 5

File: PGPB

Jul 12, 2001

PGPUB-DOCUMENT-NUMBER: 20010007657

PGPUB-FILING-TYPE: new-utility

DOCUMENT-IDENTIFIER: US 20010007657 A1

TITLE: Compositions and methods for manipulating glial progenitor cells and treating neurological deficits

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments		KWIC	Draw Desc
Image												

☐ 4. Document ID: US 6277820 B1

L5: Entry 4 of 5

File: USPT

Aug 21, 2001

US-PAT-NO: 6277820

DOCUMENT-IDENTIFIER: US 6277820 B1

TITLE: Method of dopaminergic and serotonergic neuron formation from neuroprogenitor cells

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KIMC	Draw Desc
Image											

☐ 5. Document ID: US 5514552 A

L5: Entry 5 of 5

File: USPT

May 7, 1996

US-PAT-NO: 5514552

DOCUMENT-IDENTIFIER: US 5514552 A

TITLE: Hybrid neuronal cell lines compositions and methods

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KIMC	Draw Desc
Image											

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Terms	Documents
L4 and l1	5

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=> d his

(FILE 'HOME' ENTERED AT 18:52:11 ON 29 MAY 2002)

FILE 'MEDLINE, CAPLUS, BIOSIS, SCISEARCH' ENTERED AT 18:52:20 ON 29 MAY 2002

L1 31 S NEUROPROGENITOR (6A) CELL  
L2 6839 S (MULTIPOTENTIAL OR MULTIPOTENT) (6A) CELL  
L3 1684571 S (EMBRYONIC (6A) (STEM OR GERM OR CARCINOMA)) OR ES OR EG OR EC  
L4 1690655 S L2 OR L3  
L5 6 S L1 AND L4  
L6 3 DUP REM L5 (3 DUPLICATES REMOVED)

=> d 1-3 bib ab l6

L6 ANSWER 1 OF 3 MEDLINE DUPLICATE 1  
AN 2001673402 MEDLINE  
DN 21576218 PubMed ID: 11574545  
TI Regulation of apoptosis during neuronal differentiation by ceramide and b-series complex gangliosides.  
AU Bieberich E; MacKinnon S; Silva J; Yu R K  
CS Institute of Molecular Medicine and Genetics, Medical College of Georgia, Augusta, Georgia 30912, USA.. ebieberich@mail.mcg.edu  
NC MH61934-04 (NIMH)  
NS11853 (NINDS)  
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (2001 Nov 30) 276 (48) 44396-404.  
Journal code: 2985121R. ISSN: 0021-9258.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 200201  
ED Entered STN: 20011126  
Last Updated on STN: 20020125  
Entered Medline: 20020110  
AB Lipid analysis of gestational day E14.5 mouse brain revealed elevation of ceramide to a tissue concentration that induced apoptosis when added to the medium of **neuroprogenitor cells** grown in cell culture. Elevation of ceramide was coincident with the first appearance of b-series complex gangliosides (BCGs). Expression of BCGs by stable transfection of murine neuroblastoma (F-11) cells with sialyltransferase-II (ST2) resulted in a 70% reduction of ceramide-induced apoptosis. This was most likely due to an 80% reduced expression of prostate apoptosis response-4 (PAR-4). PAR-4 expression and apoptosis were restored by preincubation of ST2-transfected cells with N-butyl deoxynojirimycin (NB-DNJ) or PD98059, two inhibitors of ganglioside biosynthesis or p42/44 mitogen-activated protein (MAPK) kinase, respectively. In sections of day E14.5 mouse brain, the intermediate zone showed intensive staining for complex gangliosides, but only low staining for apoptosis (TUNEL) and PAR-4. Apoptosis and PAR-4 expression, however, were elevated in the ventricular zone which only weakly stained for complex gangliosides. Whole cell patch clamping revealed a 2-fold increased calcium influx in ST2-transfected cells, the blocking of which with nifedipine restored apoptosis to the level of untransfected cells.  
In serum-free culture, supplementation of the medium with IGF-1 was required to maintain MAPK phosphorylation and the anti-apoptotic effect of BCG

expression. BCG-enhanced calcium influx and the presence of insulin-like growth factor-1 may thus activate a cell survival mechanism that selectively protects developing neurons against ceramide-induced apoptosis by up-regulation of MAPK and reduction of PAR-4 expression.

L6 ANSWER 2 OF 3 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AN 2002:199003 BIOSIS

DN PREV200200199003

TI Detection of unrestricted **multipotential stem cells** in human cord blood.

AU Wernet, Peter (1); Fischer, Johannes (1); Knipper, Andreas; Degistrici, Oezer; Kogler, Gesine (1)

CS (1) Institute for Transplantation Diagnostic and Cell Therapeutics, University Medical Center, Duesseldorf Germany

SO Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 550a.

<http://www.bloodjournal.org/>. print.

Meeting Info.: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001

ISSN: 0006-4971.

DT Conference

LA English

AB Adherent fibroblastoid cells were obtained spontaneously after seeding freshly isolated mononuclear cells from fresh and frozen human cord blood into cultures with HS 100 medium. Amplification of these cells over many passages (up to 30) was achieved in the presence of PDGF-BB (platelet - derived growth factor), EGF (recombinant human epidermal growth factor) and of IGF (insulin-like growth factor) (PEI). Contaminating monocytes (CD14+) were lost spontaneously between the second and the third passage. These densely growing adherent cells were not differentiating under these conditions and remarkably displayed the embryonic cell surface antigen SSEA4, but were negative for CD45, HLA class I and II as well. Employing distinct in vitro culture protocols it was possible to induce them into a number of differentiation pathways, such as osteopoiesis, fat cells, **neuroprogenitors**, cardiomyocytes and hematopoiesis. Employing highly sensitive quantitative RT-PCR-analyses, time dependent occurrence of lineage specific transcription factors have been defined consecutively in these various but specific differentiation cultures. In the presence

of

dexamethasone, ascorbic acid and beta-glycerolphosphate (DAG) systematically osteoblast and bone formation (positive alicarin red staining) was achieved. When PEI driven cultures were compared with DAG driven cultures during passages 6 to 15, distinct surface marker profile and transcription factor differences were apparent. PEI induced adherent cells strongly proliferated without differentiation and continued to express SSEA4, whilst DAG induced cultures lost SSEA4 and accumulated distinct transcription factors. PEI induced cells continued to be

positive

for transcription factors sox2, rex1, runx1, whereas DAG driven cultures became negative for those, but acquired consecutive positivity for osteocalcin, osteopontin, alkaline phosphatase, EGF receptor, PDGFR-alpha and Endoglin. In contrast when primarily PEI amplified CB cells were placed into a neural inducing differentiation medium (N2), containing

only

0.5% FCS, oligodendrocytes and dopaminergic neurons (nestin positive) could be obtained and expanded over at least 10 passages. Furthermore adherently growing primary CB cultures could be differentiated in the presence of betaFGF and azacytidine into cardiomyocytes. Although these cultured cells of varying differentiation have not yet been analyzed on a clonal level, they demonstrate the presence of very early

**multipotential stem cells** in cord blood which are much more potent in their differentiation plasticity as the so called mesenchymal stem cells observed in human bone marrow. These unrestricted CB stem cells appear to be excellent candidates for the development of regenerative therapeutics.

L6 ANSWER 3 OF 3 MEDLINE DUPLICATE 2  
 AN 2001033340 MEDLINE  
 DN 20485449 PubMed ID: 11029621  
 TI Developmental regulation of neurogenesis in the pluripotent human embryonal carcinoma cell line NTERA-2.  
 AU Przyborski S A; Morton I E; Wood A; Andrews P W  
 CS Department of Biomedical Science, University of Sheffield, Western Bank, Sheffield S10 2TN, UK.  
 SO EUROPEAN JOURNAL OF NEUROSCIENCE, (2000 Oct) 12 (10) 3521-8.  
 Journal code: BYG. ISSN: 0953-816X.  
 CY France  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Priority Journals  
 EM 200011  
 ED Entered STN: 20010322  
 Last Updated on STN: 20010322  
 Entered Medline: 20001130  
 AB Embryonal carcinoma (EC) cells provide a caricature of pluripotent **embryonic stem (ES)** cells and may be used as surrogates for investigating the mechanisms that regulate cell differentiation during embryonic development. NTERA-2 is a human **EC** cell line that differentiates in response to retinoic acid yielding cells that include terminally differentiated neurons. The expression of genes known to be involved in the formation of the vertebrate nervous system was examined during retinoic acid-induced NTERA-2 differentiation. Differentiation of these human **EC** cells into neurons could be divided into three sequential phases. During phase 1, in the first week of differentiation, *hath1* mRNA showed a small transient increase that correlated with the rapid accumulation of nestin message, a marker of neuroprogenitors. Transcripts of nestin were quickly downregulated during phase 2 as expression of *neuroD1*, characteristic of **neuroprogenitors** exiting the cell cycle, was induced. A neural cell surface antigen, detected by the monoclonal antibody A2B5, was expressed by cells exiting the cell cycle, correlating with the expression of *neuroD1* as the cells became post-mitotic. Markers of mature neural cells (e.g. synaptophysin and neuron-specific enolase) were subsequently increased during phase 3 and were maintained. This regulated pattern of gene expression and commitment to the neural lineage indicates that differentiation of NTERA-2 neurons in vitro follows a similar pathway to that observed by neural ectodermal precursors during vertebrate neurogenesis in vivo.

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